



## Report on Pre-Regulatory Landfills

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Division of Waste Management

*Department of Environmental Quality*



# *NC Pre-Regulatory landfill program*



- A pre-regulatory landfill is defined as any land area, whether publicly or privately owned, on which municipal solid waste disposal occurred prior to January 1, 1983, but not thereafter, and does not include any landfill used primarily for the disposal of industrial solid waste (NCGS 130A-290).
- Disposal tax: \$2/ton on municipal solid waste and construction and demolition debris disposed in landfills in North Carolina or transferred out of state for disposal (NCGS 130A-295.9).

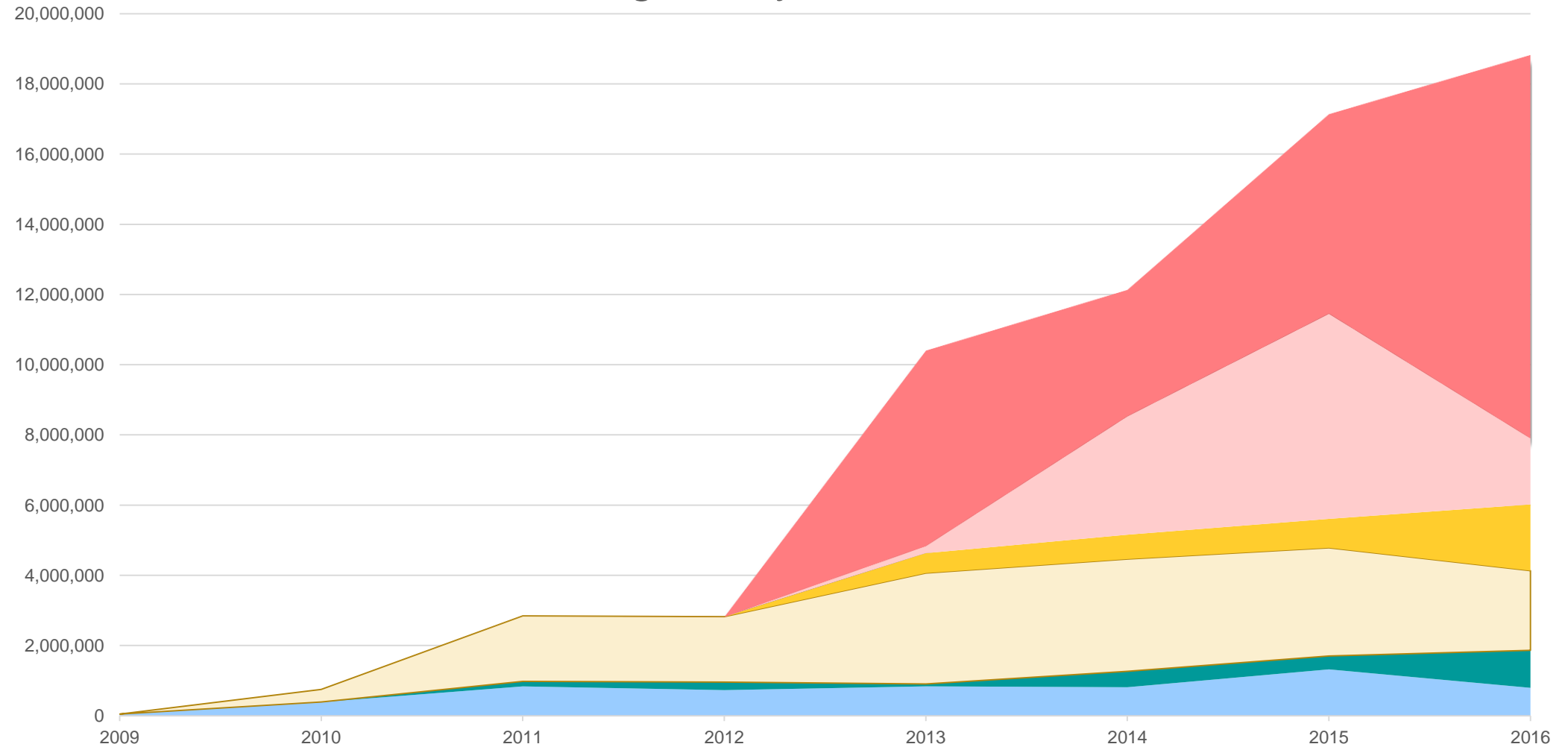
# *Pre-Regulatory Landfill Tax Receipts*

Fiscal Year	Funds Received
2008-09	\$ 3,889,209
2009-10	\$ 9,218,602
2010-11	\$ 8,861,002*
2011-12	\$ 9,362,913
2012-13	\$ 8,729,053
2013-14	\$ 7,899,526
2014-15	\$ 8,588,736*
2015-16 (thru 2 <sup>nd</sup> qtr.)	\$ 4,473,131
 Total Waste Disposal Tax Receipts	 \$ 61,022,173*

\*Amount adjusted for legislative transfers

# *Annual Expenditures and Obligations*

## Pre-Regulatory Landfill Fund



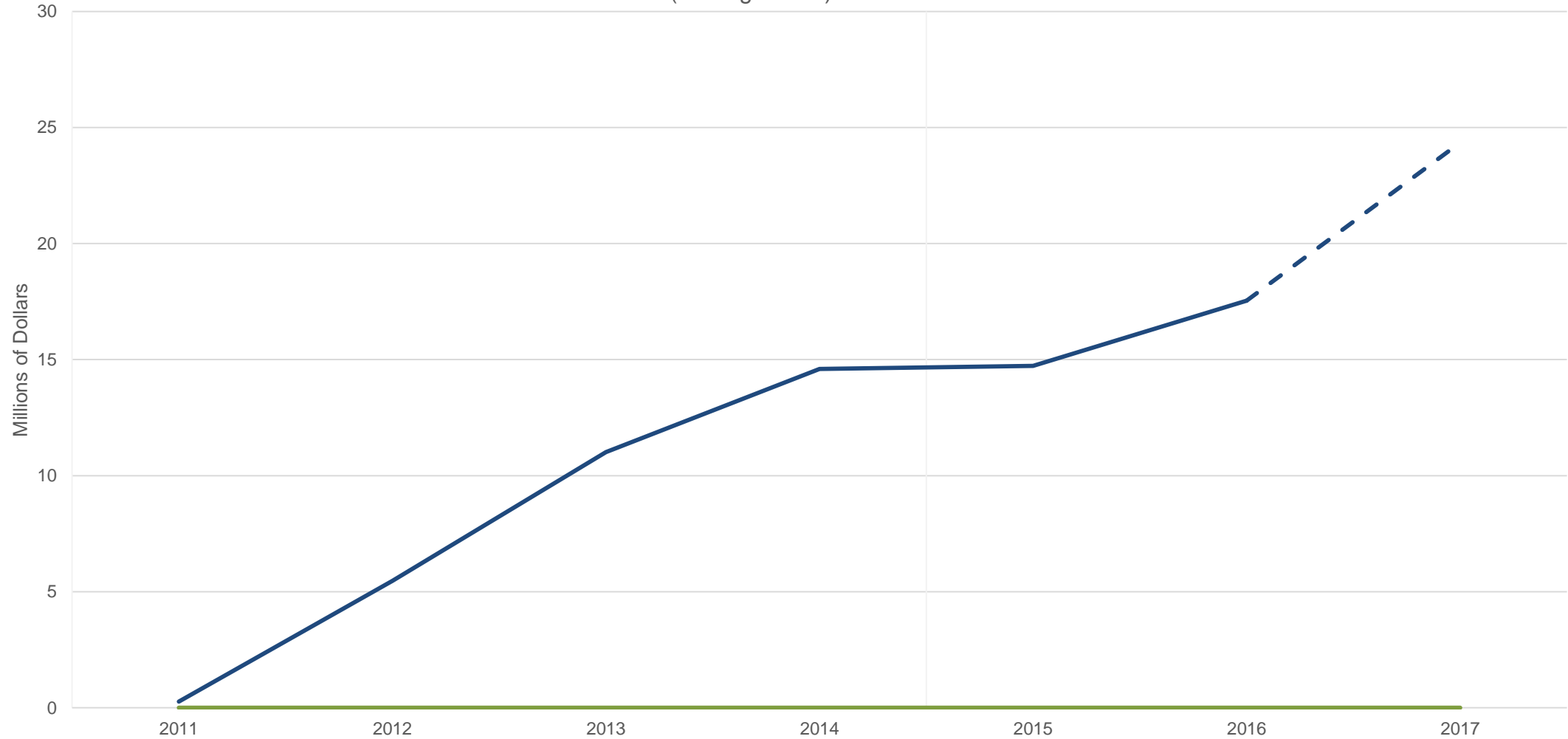
Administration Potable Water Service Assessment Assessment Obligation Remedial Action Remedy Obligation



# Funds Spent by Fiscal Year

Activities	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16 (thru 2 <sup>nd</sup> qtr.)	Cumulative Actions	Cumulative Cost
	Cost of Actions	Cost of Actions	Cost of Actions	Cost of Actions	Cost of Actions	Cost of Actions	Cost of Actions	Cost of Actions		
New Site Evaluations		335,836	1,511,779	1,785,340	3,158,449	3,100,426	3,010,831	2,017,770	184	14,920,430
First Phase Assessments Completed									54	
First Phase Assessments Ongoing									84	
Delineation Phase Assessments Ongoing									243	
Delineation Phase Assessments									64	
Local Government Phase Assessments		22,325	353,388	78,912	0	96,746	70,215	1,956	7	623,542
Remedial Design Ongoing			1,966	1,899	209,201	3,374,693	5,845,590	1,890,184	47	11,323,532
Remedial Action Ongoing									20	
Remedial Action Completed									7	
Homes Provided Alternate Water or Treatment Systems Maintained		577	750	56,220	25,061	52,533	56,109	32,210	90	223,460
Number of Water Supply Wells Sampled		2,841	142,486	172,793	42,766	401,224	325,191	36,398	818	1,123,699
Administration-PRLF	46,846	388,310	474,158	503,510	578,009	560,515	564,745	307,133		3,423,226
Administration-IHSB			213,028	226,215	259,685	251,826	256,703	137,988		1,345,445
Reductions in Funds			149,175				500,000*			649,175
Total PRLF Program Expenses	46,846	749,888	2,484,525	2,598,674	4,013,486	7,586,137	9,872,682	4,285,651		31,637,890
Total Fund Expenses	46,846	749,888	2,846,728	2,824,889	4,273,171	7,837,963	10,629,385	4,423,639		33,632,509
*Special legislative provision allows \$500,000 of tax to Division of Waste Management's general fund annually.										

PRE-REGULATORY LANDFILL PROGRAM  
REMEDIAL ACTION STARTS - CUMULATIVE COST OBLIGATION  
(Through 2015)



\*Does not include contaminant assessment and delineation expenses, alternate water and other immediate abatement expenses.

\*Projected expenditures reflect remedial actions set to start pending contract approval.

# Screening of New Site Discoveries

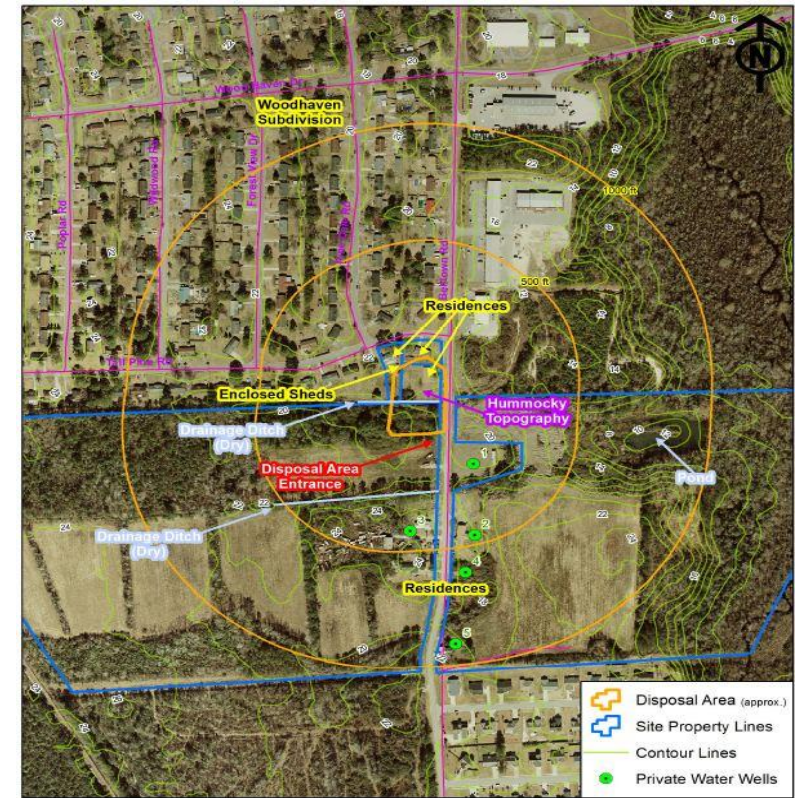
*184 additional waste disposal locations have been reported and evaluated for eligibility since Program started receiving funding in 2009*

*677 total sites cataloged*

*DEQ's PRLF Program works with local governments and owners on collecting data to determine if a disposal site is qualified*



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# *Testing Drinking Water Supplies*

**818** Drinking Water Supplies Sampled



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# *Alternate Water Supplies*

**23** Treatment Systems Installed and Maintained

Bottled water provided until treatment system/water line installed

Water line contract being finalized with private water company



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# *Delineation Phase Assessment*

**64** of the highest risk sites have contaminant delineation completed/risk of exposure characterized.

**35** other sites currently undergoing contaminant delineation.





# Redevelopment

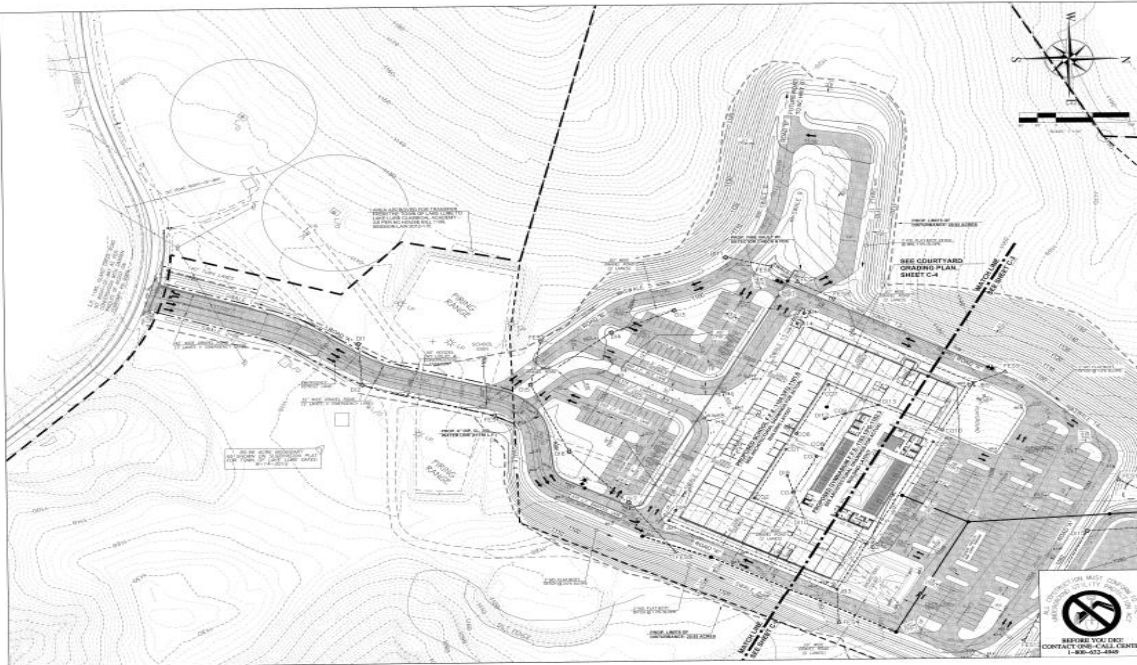
Redevelopment a priority because:

1. Uncontrolled development could lead to exposure
2. Benefits local economy
3. Moving property from unattended to active use prevents additional dumping of hazardous waste

Work with owners to conduct successful safe reuse

Allows development while ensuring waste and contaminants are properly contained

**23** Priority sites with various development plans





# *Priority Case - Redevelopment*

## *Lake Lure Dump*



- Redevelopment Priority - school
- 3 drinking water supply wells within 500 to 1000 feet
- Slope failure caused waste to dam the stream
- Exceedances of North Carolina 2B and 2L surface and groundwater standards
- Landfill gas

# *Lake Lure Dump Safe Redevelopment as a School*

*Remedial Action*



*Lake Lure Classical Academy*





# *Prioritization System Factors*

- Residence on waste disposal area
- Water Supply exceeding standard
- Water Supply < 500 feet
- Water Supply between 500 and 1,000 feet
- Number of Water Supplies within 1,000 feet
- Structures on waste disposal area
- Waste disposal size (larger volumes generate methane explosion risks)
- Property use within 1,000 feet: Residence, School, Daycare, Church
- Modifying Factors: Park use, known presence of methane, number of nearby homes



# Active Priority Sites

## ***Redevelopment Priorities***

Airport Road Landfill (Forsyth)  
Cary Dump (Wake)  
Old Raleigh #11 (Dorothea Dix) (Wake)  
East Wake Landfill (Wake)  
Greensboro City Landfill (Guilford)  
Henderson Co. lf (Henderson)  
Holly Springs Dump (Wake)  
Kinston Demolition Landfill (Lenoir)  
Le Myers Park (Cabarrus)  
Monroe Landfill (Union)  
 Mooresville Landfill (Cabarrus)  
Mud Creek Dump (Henderson)  
Old Charlotte/Vanguard landfill (Mecklenburg)  
Old Raleigh #3 (Brookside Dr.) (Wake)  
Old Raleigh #4 (Dunkin Donuts) (Wake)  
Old Raleigh #9 (Howard Johnson) (Wake)  
Oxford Dump (Granville)  
Plymouth Refuse Dump (Washington)  
Reidsville Landfill (Rockingham)  
Reynolds School (Haywood)  
Statesville Road (Mecklenburg)  
Town of Wrightsville Beach Old Landfill (New Hanover)  
University of NC/Old Sanitary (Orange)

## ***Priorities due to Score***

***(only top 20 of the active cases listed)***

Albemarle Dump (Stanly)  
Belltown Rd. Dump (Craven)  
Bingham Park (Guilford)  
City of Lumberton (Robeson)  
City of Winston-Salem (Forsyth)  
Closed City of Henderson (Vance)  
Clayton Ball Field (Johnston)  
Cumberland Co. landfill (Cumberland)  
Durham County/Rocky Knoll (Durham)  
Durham County/Wren Rd. (Durham)  
Edgecombe landfill (Edgecombe)  
Elon College landfill (Alamance)  
Falls Dump (Gaston)  
Flemington landfill (New Hanover)  
Franklinton Dump (Franklin)  
Mt. Holly (Gaston)  
Hickory Grove Road TCE (Gaston)  
J. H. Winston (Franklin)  
Marbery (Durham)



## *Unseen Risks*

- Hazards most often not visible
- 77% Drinking water supply, residence, school, church, daycare or park located within 1000 feet of a pre-regulatory landfill
- Groundwater contamination affecting drinking water supplies
- Leachate, contaminated groundwater and unstabilized waste discharging to creeks
- Direct contact with contaminated soils
- Hazardous substance vapors from contaminated groundwater and wastes migrating to homes
- Explosive levels of methane at larger volume sites

# *Hazards Currently Being Managed*

- 7 Sites with remedial action complete
- 1,342 Acres of mixed hazardous and solid waste currently being managed
- 44,522,596 Tons of mixed hazardous and solid waste currently being managed



# *Areas of Effort to Encourage Rate of Progress*

- Contract Process
- Pilot studies to engage private businesses with contracts and grants
- Permits
- Property Access
- Owner communication and commitment
- Multiple public involvement steps
- Boiler plate letters and forms
- Contractor guidance documents

# Questions ?

